Patent Claims

1. A cross-reactive antibody, which specifically inhibits or blocks the mammalian Toll-like receptor 2 (TLR2)-mediated immune cell activation by specifically binding to the C-terminal portion of the extracellular domains of at least human and murine TLR2.

2. The antibody of claim 1, which is a polyclonal antibody, a monoclonal antibody, a humanized antibody, a chimeric antibody, or a synthetic antibody.

3. The antibody of claim 1 or 2, wherein the antibody specifically binds through its variable regions of the heavy- and light chain carrying the amino acid sequence as depicted in SEQ ID NO:1 and/or 2, or a variant thereof.

4. The antibody of one or more of claims 1 to 3, wherein said antibody is linked to a pharmaceutical agent, and/or to a detectable agent.

5. An isolated nucleic acid coding for the variable regions of the heavy and/or light chain of the antibody of one or more of claims 1-4.

6. An isolated nucleic acid which comprises the sequence of SEQ ID NO: 1 and/or 2 or variants thereof, wherein the variants are each defined as having one or more substitutions, insertions and/or deletions as compared to the sequence of SEQ ID NO: 1 and/or 2, provided that said variants hybridize under moderately stringent conditions to a nucleic acid which comprises the sequence of SEQ ID NO: 1 and/or 2, and further provided that said variants code for an amino acid having activity as a variable region of an antibody specifically binding to the C-terminal portion of the extracellular domains of at least human and murine TLR2 or

provided that said variants comprise nucleic acid changes due to the degeneracy of the genetic code, which code for the same or a functionally equivalent amino acid as the nucleic acid sequence of SEQ ID NO: 1 and/or 2.

7. The isolated nucleic acid of claim 6, which comprises at least the sequence of nucleic acids No. 172 – 201, 244 – 294 and/or 385 – 417 of SEQ ID NO: 1, or of nucleic acids No. 130 – 174, 220 – 240 and/or 337 – 363 of SEQ ID NO:2, or a part thereof.

8. The isolated nucleic acid of one or more of claims 5-7, said isolated nucleic acid further comprising a nucleic acid specifying one or more regulatory sequences operably linked thereto.

9. A vector, which comprises the nucleic acid sequence of one or more of claims 5-8.

10. An expression vector, which comprises the nucleic acid sequence of any of claims 5-8 and one or more regulatory sequences.

11. The vector of claim 9 or 10, which is a plasmid or a retroviral vector.

12. A host, which has been transformed with the vector of any of claims 9-11.

13. The host of claim 12, which is a eukaryotic cell.

14. The host of claim 13, which is a mammalian cell, plant cell, yeast cell or an insect cell.

15. The mammalian cell of claim 14, which is a CHO, COS, HeLa, 293T, HEH or BHK cell.

16. The host of claim 12, which is a prokaryotic cell.

17. The host of claim 16, which is *E.coli* or *Bacillus subtilis*.

18. A pharmaceutical composition comprising an antibody of one or more of claims 1-4, a nucleic acid of one or more of claims 5-8 or a vector of one or more of claims 9-11, and a pharmaceutically acceptable carrier.

19. The pharmaceutical composition of claim 18, which further contains one or more pharmaceutically active ingredients.

20. The pharmaceutical composition of claim 18 or 19, wherein the one or more pharmaceutically active ingredients are selected from antibiotic agents, antiinflammatory agents, and / or agents blocking further pattern recognition receptors.

21. The pharmaceutical composition of claim 20, wherein the agent is specific for TLR3, TLR4, TLR5, TLR7, TLR8, and/or TLR9.

22. A hybridoma which produces a monoclonal antibody of one of claims 1-4.

23. Use of an antibody of one or more of claims 1-4, of a nucleic acid of one or more of claims 5-8 or a vector of one or more of claims 9-11 or of the composition of claims 18-21 in the prevention and/or treatment of inflammatory processes or any other process induced by bacterial infection, trauma, or chronic inflammation.

24. The use of claim 23, wherein the individual dose administered to a mammal, preferably a human, is between 1 mg to 100 mg/kg body weight.

25. The use of claim 24, wherein the individual dose is administered as a single dose to the mammal suffering from an acute infection.

26. The use of claim 25, wherein the individual dose is administered repeatedly to the mammal suffering from a chronic infection and/or inflammation.

27. The use of claim 24 - 26, wherein the dose of the antibody is between 10 to 60 mg/kg

body weight.

28. The use of claim 27, wherein the dose is between 20 to 40 mg/kg body weight.

29. The use of an antibody of one or more of claims 1-4, of a nucleic acid of one or more of claims 5-8 or a vector of one or more of claims 9-11 or of the composition of claims 18-21 for the prevention and /or treatment of bacteriaemia or sepsis.

30. The use of claim 26, wherein the chronic infection is selected from rheumatoid or vascular arthritis, inflammatory bowel disease.

31. A screening method for identifying an antagonist capable of inhibiting or blocking TLR2, comprising the steps of:

(a) generating or providing mammalian TLR2,

(b) contacting said TLR2 with a candidate compound,

(c) detecting the inhibition or blocking of said compound by a suitable detection method,

(d) selecting a compound that has been tested positive in step (c),

(e) optionally repeating steps (a) – (d) with a suitably modified form of the compound of step (d).